



**Corpus Christi MPO  
Annual Performance and Expenditure Report  
(APER) FY 2021**

## TASK 1 – ADMINISTRATION AND MANAGEMENT

Task 1 Included an overall description of the Corpus Christi MPO’s administration and coordination efforts. Included were all subtasks listed in the FY 2021 - FY 2022 Unified Planning Work Program (UPWP) with a description of each subtask product received or work accomplished and the agency responsible. If work under a subtask was completed by a consultant or subcontractor, this is indicated. If an “amount expended” exceeded or is below the “amount budgeted” by 25% or more, this was noted in the task funding table and an explanation provided for the variance. For FY 2021 no tasks exceeded the 25-percent agreements limit. Some of the funding for subtasks were underspent as expected and rolled over into the FY 2022 UPWP as multi-year tasks.

### TASK 1 – OVERALL DESCRIPTION: ADMINISTRATION AND OUTREACH

Task 1.0 is managing and administering the federal transportation planning requirements in and for the Corpus Christi Metropolitan Planning Organization (Corpus Christi MPO). Included in this task are the direct expenses associated with the planning effort and products to be delivered within the UPWP.

**OBJECTIVE** – Coordinate the transportation planning activities of the Corpus Christi MPO with the Texas Department of Transportation (TxDOT), Federal Highway Administration (FHWA), the Corpus Christi Regional Transportation Authority (CCRTA) and interested public agencies as part of the metropolitan transportation planning process. Maintain records of all activities needed for the comprehensive, coordinated, and continuing (3C) transportation planning process. Take actions to enhance the technical capacity of the planning process and insure a proactive public involvement process that provides full public access to key decisions in developing both short- and long-range plans and programs.

**METHODOLOGY** – Work elements in this activity are administrative and management tasks associated with the function, coordination, and day-to-day activities of the Corpus Christi MPO. These efforts include the development of goals and policies; committee structures and staffing; interagency coordination and communication; and staffing of various transportation planning related efforts. Required duties include communicating with the public and committee members regarding meetings, preparation of meeting packets, attendance at meetings, coordination of projects/programs, and oversight of planning activities. Additionally, this task meets the technical objectives of the organization regarding computer equipment and/or software packages. Direct expenses are listed in subtask 1.9. The additional local funds through the Corpus Christi MPO’s Strategic Reserve Fund pays for special projects and for individual professional membership dues for Corpus Christi MPO staff members.

Continuous activities are primarily administrative tasks that are performed routinely over the course of a year. Examples of continuous activities include monthly meetings of the Transportation Policy Committee and the Technical Advisory Committee or billings sent to TxDOT for reimbursement.

### SUBTASK 1.1 – PROGRAM COORDINATION AND DIRECTION

This subtask was administration of the Corpus Christi MPO program. Corpus Christi MPO staff prepared and submitted required reports, certification, and administrative documentation to maintain continuity and credibility of the Corpus Christi MPO. Staff also prepared requests for proposals and solicited for contractual services. We also assisted participating and collaborating agencies as needed in relation to our UPWP tasks.

#### Work Performed and Status

Corpus Christi MPO staff performed and completed the following: Facilitation of the metropolitan transportation planning process for FY 2021, including compliance with all federal and state regulations, requirements, and certifications. These key processes involved the advance groundwork for the development of the 2050 Metropolitan Transportation Plan (MTP), FY 2021-2024 Transportation Improvement Program (TIP) and its amendments.

- Issued On-Call Performance-Based Planning and Programming Process Enhancement Request for Proposal and executed contracts and agreements with those selected consulting firms.

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- Executed contracts and agreements between the Corpus Christi MPO and vendors and suppliers as well as partner agencies such as the Corpus Christi Regional Transportation Authority (CCRTA) for leased building space. These were all routine contracts that continued in FY 2021.
- Reviewed and executed group insurance agreements to make these available for staff.
- Delivered proactive and continuous public involvement activities to ensure that planning activities were responsive to community values and needs. These efforts were focused on the aspects of the 2045 MTP, 2021-2024 TIP and Congestion Management Process (CMP) as well as the FY 2021- FY 2022 UPWP.
- Non-lobbying participation in the Association of Metropolitan Planning Organizations (AMPO) and Texas Metropolitan Planning Organizations (TEMPO) related to Corpus Christi MPO activities for planning products and programs. The Corpus Christi MPO staff attended a few in-person meetings, however most meetings were held virtually due to the pandemic.

### **SUBTASK 1.2 - UNIFIED PLANNING WORK PROGRAM (UPWP) DEVELOPMENT**

In this subtask, Corpus Christi MPO staff maintained the FY 2021 UPWP and began the process to revise the FY 2022 UPWP based on current activities and anticipated changes to subtasks. Reviewed and verified the Annual Project Listing (APL) in FY 2021 for the transportation projects that used federal funds in the prior fiscal year, FY 2020. Corpus Christi MPO staff also started our internal discussions of the anticipated subtasks for the FY 2023 UPWP under this subtask.

#### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- A compliant FY 2021- FY 2022 UPWP that delivered transportation planning tasks.
- Reviewed possible amendments to the FY 2022 UPWP as issues arose to reflect planning priorities within the Corpus Christi MPO area. These were based on financial data availability for the Corpus Christi MPO's planning tasks as well as part of the analysis of monthly expenditures above or below expenditure estimates, but within the 25% limits for UPWP Tasks.
- Reviewed transportation planning activities at the local governments and agencies to determine if the projects or planning activities should be amended into the current UPWP or added to the next UPWP. The most current efforts of local agency activities were added as Section VIII: PARTNER AGENCY PLANNING STUDY COORDINATION of the current FY 2021 – FY 2022 UPWP. Examples were the Port of Corpus Christi projects, City of Corpus Christi Area Development Plans, City of Portland Capital improvements Program and 2040 Plan developments, as well as county planning projects in Nueces and San Patricio County.

### **SUBTASK 1.3 – MONTHLY BILLING AND FINANCIAL MANAGEMENT**

Prepared budgets, maintained financial records, equipment inventory and ensured monies were spent appropriately. Processed timesheets, billings and invoicing, budgeting and management of transportation planning funds; the cost of operating the Corpus Christi MPO, office lease, furniture, equipment lease/rental. An Annual Performance and Expenditure Report (APER) is prepared at the end of each fiscal year (FY 2021) in accordance with TxDOT policy and procedures for tasks that utilized FHWA and Federal Transportation Administration (FTA) planning funds. The Corpus Christi MPO will seek state recommendation/federal approval for any expenditure exceeding \$25,000.

#### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Developed and delivered accurate administrative and financial records and reports of the planning activities. Worked with our fiscal agent – Nueces County and TxDOT staff to ensure that information delivered met their reporting needs. For any issues raised by the county or state, we researched and clarified records to ensure all the reported amounts were correct and documented.
- Completed 12 monthly expenditure reports for submittal to the county and TxDOT.

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- Completed the final annual billing, submitted the Annual Performance & Expenditure Report (APER) to TxDOT in December 2020 for the prior fiscal year and worked on elements of the APER for FY 2021.
- Reviewed and verified the Annual Project Listing (APL is a listing of completed TIP projects) provided by TxDOT for FY 2020.
- Prepared and submitted the Single Audit Statement to TxDOT.

### **SUBTASK 1.4 – STAFF TRAINING AND EDUCATION**

Subtask 1.4 is the Corpus Christi MPO staff professional development and training program. Transportation planning funds allow staff members of the Corpus Christi MPO to travel and attend transportation planning and professional development conferences, workshops, and training. The Corpus Christi MPO reviews opportunities for training sessions for the Transportation Policy Committee, the Technical Advisory Committee, and any subcommittee members, and to local governments and participating agencies. These opportunities are communicated to the appropriate committee.

For out of state travel, the Corpus Christi MPO seeks prior TxDOT approval as appropriate. The Corpus Christi MPO staff reviewed agendas and subject matter for possible participation in virtual events and trainings of the following groups:

- American Association of State Highway and Transportation Officials (AASHTO)
- American Society of Civil Engineers (ASCE)
- American Planning Association (APA)
- American Public Transportation Association (APTA)
- Association of Metropolitan Planning Organization (AMPO)
- Environmental Protection Agency (EPA)
- Environmental Systems Research Institute (ESRI)
- Institute of Transportation Engineers (ITE)
- Texas Association of MPOs (TEMPO)
- Texas Department of Transportation (TxDOT)
- Transportation Research Board (TRB)
- Texas Transportation Institute (TTI)
- National Transit Institute (NTI)
- National Highway Institute (NHI)
- National Aging and Disability Training Center (NADTC)

### Work Performed and Status

Corpus Christi MPO staff performed, participated in, and completed the following:

- Corpus Christi MPO staff participated in-person and mostly virtually for state and national conferences, seminars, training workshops, workgroups, and webinars through:
  - TxDOT (local government project procedures, current state of curb ramps and pedestrian facilities, TxDOT Yearly Roundtable, TxDOT Freight Strategic Planning Workshop),
  - FHWA (Freight, Resiliency, Transportation Equity, Assessment of the Effectiveness of PBPP in Transportation Decision-Making for State DOTs and MPOs),
  - FTA,
  - EPA (Incorporating Equity in Disaster Mitigation and Climate Adaptation Programs),
  - Texas Transportation Institute (TTI) (Planning process, Workforce Impacts of Transit Automation, TDS Lunch with an Expert),
  - Association of Texas MPOs (TEMPO) (Workshops and Meetings),
  - Association of MPOs (AMPO), 2020 Virtual Conference, Public Involvement Working Group Webinar,
  - American Planning Association (APA) (Navigating an efficient and equitable recovery),
  - TRB (presented at the Annual Meeting, Advancing Transportation Equity, How accurate are Traffic Forecasts?),

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- ITE (Prioritizing Safety with Transportation Equity),
- AASHTO (Environmental Justice Peer Exchange, Safe Streets for All),
- Volpe Center (Safety Data Initiative),
- AASHTO Center for Environmental Excellence (Peer exchange on Environmental Justice Analysis Strategies),
- ENO Center (How Automated Delivery Could Shape the Future of Local Commerce),
- H-GAC Brown Bag Lunch Webinar (Real-time Traffic Data and Tools),
- United States Chamber of Commerce (Infrastructure Investments to Speed the recovery) and
- Software suppliers (ESRI, Caliper, PTV) (Multimodal modeling at Meso and Micro levels, Fundamentals of using TREDIS, Forecasting Traffic Impacts of Development, Geospatial Enabled Linear Referencing, Enterprise Data Enhancement) and software suppliers.
- Conferences / Forums
  - NCHRP Resiliency for Real Forum
  - Information Forum on Engagement in the Time of COVID-19
  - Forum on Equity and Public Engagement for Transportation Planning
  - Attended Conference on Virtual Public Engagement for Transportation Planning
  - AASHTO Standing Committee on Planning - Research Subcommittee
- Presentations
  - Census Bureau Briefings
  - Complete Trip - ITS4US Deployment Program ConOps: ARC
  - Complete Trip - ITS4US Deployment Program ConOps: Buffalo
  - Extreme Weather and Climate Change Adaptation
  - FHWA and FTA Assessment on the Effectiveness of Performance-Based Planning and Programming Confirmation
  - Multiple Objective Decision Analysis
  - TIA - TMC Operations & Preparedness
  - TxDOT Corpus Region TSMO Program Plan - Capability Maturity Framework (CMF) Preview
  - TxDOT's virtual Public Transportation Advisory Committee (PTAC).
- Webinars
  - 3 Technologies That Are Helping Agencies Hit Their Vision Zero Goals
  - AASHTO: The Pivotal Role of Public Involvement in the Surface Transportation
  - AMPO: GIS & Data Visualizations
  - Exploring Speed Management in the US and Abroad
  - FHWA VPI: Engaging Traditionally Underserved Communities using Virtual Public Involvement
  - General Land Office: Technical Advisory Webinar about Meeting the Challenges of Climate Change
  - Improving Access for All: Bringing On-Demand Technology to Paratransit
  - National Aging and Disability Transportation Center: Meeting the Transportation Needs of Diverse Older Adults and People with Disabilities
  - NITC: Data-Driven Mobility Strategies for Multi-Modal Transportation
  - Panama Canal/Panamax: Impacts to ports.
  - Rural Transportation & Medical Access
  - Seeking synergies and resolving conflicts between technologies and policies impacting transportation
  - The Texas Triangle: An Emerging Power in the Global Economy
  - Transportation Equity at USDOT - Information Session
  - TRB: Addressing Justice in Transportation
  - Texas Innovation Alliance: Rapidly Advancing Automated Transit
  - TRB: Best Practices in Virtual Public Participation
  - TRB: The New Virtual Reality for Public Meetings and Social Distancing
  - Useability of UrbanSim in allocating households and jobs
  - Volpe: Strategies to Overcome Transportation Barriers for Rent Burdened Residents

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- Volpe: The Evolution of VPI During the Covid-19 Pandemic: State DOT Practices and Lessons Learned
- Volpe: Mobility Best Practices and E-Mobility Diversity, Equity, and Inclusion in Accelerating EV Adoption
- Workgroups / Training
  - AMPO Data Working Group
  - AMPO Emerging Technologies Working Group
  - COMPAT Peer Exchange
  - Decision Lens: How to Prioritize Projects
  - Decision Lens: How to Use Decision Lens with Performance Metrics
  - Travel Demand Model Master Network Training

### **SUBTASK 1.5 – COMMUNITY PLANNING AND DEVELOPMENT ACTIVITIES**

Subtask 1.5 is sponsoring and conducting meetings, including providing support to both the Transportation Policy Committee and the Technical Advisory Committee, attending mission-related meetings, along with bylaw/policy development and implementation. It is also coordinating and working with other agencies in Texas involved in planning and programming transportation projects, especially participation on partner agency committees and in transportation-related community planning efforts.

The Corpus Christi MPO utilized a regional approach to transportation planning by coordinating planning efforts and cooperating on information gathering and project implementation across multiple agencies – continuing and building upon previous working relationships and coordinating among: Local member government land use and development agencies; economic development agencies, the regional transit agency (CCRTA), environmental resource agencies, community and social agencies, the Texas Department of Transportation (TxDOT); the Federal Highway Administration (FHWA); and the Federal Transit Administration (FTA).

#### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Worked with San Patricio County and participating cities for the scoping of the San Patricio Industrial Master Plan as an administrator.
- Participated in Corpus Christi Uptown Corridors Revitalization Strategy Development
- Worked extensively with the TxDOT- Corpus Christi District on efforts related to roadway projects in various stages of development as well as planning efforts to prioritize projects with various funding categories.
- Participated in member agency planning activities including the Port of Corpus Christi Long-range Planning, Harbor Bridge Project CAB, City of Corpus Christi Transportation Advisory Committee, CCRTA budget workshops, Nueces County CIP plans.
- Joined the discussions with the City of Corpus Christi for their planning efforts for North Beach, Padre Island, Flour Bluff, Southside and London Master Plans
- Participated in several corridor studies, including Northwest Blvd., Staples Street, and Leopard Street. The PR 22 project was delayed pending future activities of the project sponsor.
- Other local discussions with planners for smaller developments and projects that may impact the regional planning.
- Participated in City of Corpus Christi Parks and Recreation Master Plan Update,
- Participating in 2023 GLO Coastal Resiliency Master Plan - Region 3 Restoration Project Development and Selection
- Viewed Texas General Land Office (GLO) Economic Development Strategy and Diversification Study.
- Supported and participated in the Coastal Bend Air Quality Partnership meetings.
- Participated in the monthly United Corpus Christi Chamber of Commerce Infrastructure Committee meetings.
- Helped develop the 2021-2026 regional Coastal Bend Economic Development Strategy (CEDs).

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### **SUBTASK 1.6 – COMPUTER MAINTENANCE AND WEBSITE MANAGEMENT**

This subtask supported the efficient operation of the Corpus Christi MPO office computer equipment, software and updates to the Corpus Christi MPO website. Acquired supplies, services, software, and equipment to support the Corpus Christi MPO operations. Equipment purchases over \$5,000 per unit (including the cost of any modifications, attachments, accessories, or auxiliary apparatus necessary to make it usable for the purpose for which it is acquired) required prior State approval with Federal PL funds. None of these larger requests were made in FY 2021.

The system administrator assured the working order of all computers and supporting systems. Funding was allocated and/or service contracts were in operation for the maintenance and upgrade of all automated information processing equipment and software purchased. Staff continued updating MPO equipment; audio/video equipment, servers, computer hardware and software, to include license maintenance of state of practice platforms like ESRI and Caliper. Staff also stayed abreast of current trends in technology. A description of computer hardware and software purchases in excess of \$5,000 would be submitted to TxDOT for approval prior to acquisition. None were made in FY 2021. Maintenance of the LAN Network System required various annual licensing agreements for proprietary software, GIS server support, and web hosting expenses. Website information was updated as information becomes available, and agendas and committee packets were published to the website and social media outlets monthly.

#### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- An updated website for the Corpus Christi MPO that continues to comply with HTML5 and CSS3 and conforms to the World Wide Web Consortium (W3C) guidelines: WCAG 2.0 (Website Content Accessibility Guidelines) and ATAG 2.0 (Authoring Tool Accessibility Guidelines). The World Wide Web Consortium is an international community that includes a full-time staff, industry experts, and several member organizations. These groups work together to develop standards for the World Wide Web. The MPO site was tested quarterly for accessibility compliance through online W3C validators. Additionally, the MPO continuously tests performance on various desktop and mobile devices using current popular Web browsers.
- The Corpus Christi MPO installed SSL Certificates on our websites that provided a trust indicator known as “Padlock”. This padlock indicates that the website is secure because of SSL encryption. SSL encryption acts as visual indicator for visitors to believe in the security of the website and share their information on it.
- Comprehensive evaluation and enhancements of the Corpus Christi MPO and Coastal Bend in Motion (the website for the Strategic Plan for Active Mobility) websites. The new sites offered individuals with vision impairments assistive technology (which can be obtained from a third-party source) that allows individuals with disabilities to enlarge type or have Web content read aloud for Windows and Mac OS users.
- Installed the Remote PC functions for remote office access for efficient work operation during the pandemic in FY 2021.
- Reviewed other MPO websites for best practices, developed plan for incorporating these into the website, especially in relation to the early planning for the upcoming 2050 MTP development processes.

We continued to evaluate the accessibility of MPO planning products as well as provide for the timely delivery of information about opportunities to engage in ongoing planning activities. The corpuschristi-mpo.org website sees over 1,500 visits per month and averages more than 800 downloads. The coastalbendinmotion.org website gets an average of over 500 visits per month.

### **SUBTASK 1.7 – PUBLIC OUTREACH**

In FY 2021 we continued to address the typical difficulty to engage the public in transportation planning. Many community members are not familiar with technical terms and concepts nor our processes. Good communication efforts are very different between the public, planners, and decision-makers. Within a performance-based

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planning and programming process, the goal continues to be to provide objective information to decision-makers, the public and other interested parties on relevant issues so that the target audiences can easily understand issues and trade-offs.

The Corpus Christi MPO used public outreach and communication to increase transparency and enhance the Corpus Christi MPO's credibility in the eyes of policymakers and the general public. This subtask supported the development and implementation of the Public Participation Plan (PPP) including the day-to-day responses to the public (via email and/or phone), monitored social media, participated in community outreach and public meetings/hearings as needed with emphasis on Environmental Justice populations. The Corpus Christi MPO monitored, evaluated and implemented Title VI Civil Rights/Environmental Justice compliance, guidance and requirements for plans and programs; continued to collect and analyze data related to minority or low income populations and the effect of the transportation programs and system on those populations; identified ways to mitigate impacts of the system and programs on the identified populations; expanded the database of citizens and businesses in low income or minority areas to facilitate effective outreach to those populations. General information about MPO activities and events were posted publicly as part of the Public Participation Process and provided the opportunity for all stakeholders to provide comments.

Transportation Policy Committee and Technical Advisory Committee meetings are held monthly. Dates and agendas were posted to Corpus Christi MPO's website and Corpus Christi Regional Transportation Authority's physical Bulletin Board as one of the official Corpus Christi MPO posting locations and sent out via email to an interested parties list one week before the meeting. The Transportation Policy Committee and Technical Advisory Committee meetings were open to the public and had time allotted for public comments.

The Public Participation Plan is designed to facilitate participation by a wide range of community members, especially at-risk and traditionally under-served groups including minorities, low-income populations, seniors and individuals with disabilities. Implementation of the tactics outlined in the plan provided an array of opportunities for meaningful public involvement and ensured compliance with all applicable federal regulations. Outreach efforts were undertaken as necessary in support of transportation planning activities as they occur in FY 2021.

**Engage diverse stakeholders by "going to them" and integrating all voices into the decision-making process:** The Corpus Christi MPO identified events with other agencies and organizations as possible opportunities for outreach. The intent was to do outreach at existing events and meetings, and to engage those audiences during the course of their regularly scheduled meetings and events.

**Engage Local Officials:** In FY 2021, the Corpus Christi MPO held sub-regional meetings for local elected officials and municipal staff with the purpose of informing them about the Corpus Christi MPO's role in the region and their communities' role within the Corpus Christi MPO and soliciting input on the region's transportation needs and long-range plan. Staff had ongoing one-on-one meetings with newly elected officials (Mayor of Corpus Christi) and provided opportunities for all elected officials to engage with Corpus Christi MPO decision-making.

**Engage vulnerable populations:** The public involvement processes used to develop the transportation plan and investment programs were based on "seeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low income and minority households, who may face challenges accessing employment and other services." USC 450.318

**Understand residents' priorities through public opinion research:** Gathering qualitative and quantitative information on the public's priorities can involve ranking different goals or outcomes to help support making tradeoffs and prioritizing investments. The Corpus Christi MPO solicited public opinion via an electronic survey. The Corpus Christi MPO continues to gather data on public opinion using thorough outreach efforts such as the update to the early activities for the next Metropolitan Transportation Plan (2050 MTP), as well as through general outreach such as on-line surveys.

**Inform the public through collateral, e-dashboard, website, media and social media:** As the Corpus Christi MPO gathered increasing amounts of data and expanded our analysis capabilities, we worked to provide this wealth of information to the public in an interactive way. Having readily accessible information about performance not only



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helps drive performance-based planning but can also strengthen outreach to stakeholders and other agencies. By enhancing the website, users can efficiently access MPO materials, including meeting agendas, reports and studies. Staff continued to engage with the media on the progress of the regional priorities and other transportation issues impacting transportation. The Corpus Christi MPO developed and maintained a data dashboard which provides members with transportation data specific to their municipalities and the region.

**Use Visualizations:** Visualizations help translate data into more easily understood graphics and images and more effectively communicate information. Visualizations are highly useful in a performance-based planning process to communicate performance information, particularly for complex, spatially relevant transportation data. The intent of visualization in public engagement is to help the public understand the context, to add insight to problem solving and to communicate with the public. It is used to communicate performance measures, trends and impacts of strategies to the transportation system. Visualization also can help communicate the complex nature of trade-offs between investing in various types of transportation projects and programs.

### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Published the Corpus Christi MPO 2021 Public Participation Plan (PPP) with much more detailed strategies, methods, and procedures to involve the general public.
- Published a comprehensive 2021 Corpus Christi MPO Program For Addressing Discrimination (PAD) including policies related to environmental justice (EJ) and Title VI of the Civil Right Act, Limited English Proficiency (LEP), and Achieving Racial Equity (ARE) that complies with federal guidance and provisions.
- Maintained and updated the MPO's contact database to expedite outreach efforts.
- Published legal notices in publications of regional circulation, as appropriate for public meetings related to the TIP amendments, PPP, and PAD.
- Delivered public presentations and open houses for specific plans such as the FY 2021-2024 TIP amendments, 2045 MTP, as well as presentations in various community forums about the MPO planning process and specific ongoing strategic planning initiatives, specifically the CCRTA Board and Committees, City of Portland, City of Corpus Christi, Nueces County and San Patricio County. Additional presentation of the Corpus Christi MPO activities to local business groups such as Chambers of Commerce and Economic Development Corporations.
- Documentation of media coverage of the Corpus Christi MPO activities as well as documentation of participation in community forums for the FY 2021-2024 TIP amendments.
- Met with Corpus Christi Young Professionals group to initiate on-going communication. Determined how to provide information that they can distribute in their newsletter and what is needed to make future presentations to this group and other related groups.
- Scheduled additional meetings for FY2022, such as the KiiiTV Racial, Diversity and Inclusion Collaborative.
- Met with Corpus Christi NAACP. Sought input on PAD and PPP and determined how to provide information that they can distribute in their newsletter and what is needed to make future presentations to this group and other related groups.
- Public access—in person and via live broadcast—to meetings of the Corpus Christi MPO's TPC. In the pandemic we were more reliant on email, written comments for documents and processes being developed by the Corpus Christi MPO through the TAC and TPC. Public access was always available with appropriate safety precautions of the host building owners.
- Webinars / Workgroups / Training
  - o Participated in AMPO Public Involvement Working Group
  - o Viewed TRB Webinar on Best Practices in Virtual Public Participation
  - o Viewed Information Forum on Engagement in the Time of COVID-19
  - o Viewed TRB Webinar: The New Virtual Reality for Public Meetings and Social Distancing
  - o Viewed Forum on Equity and Public Engagement for Transportation Planning
  - o Viewed FHWA VPI Webinar: Engaging Traditionally Underserved Communities using Virtual Public Involvement

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- o Viewed AMPO webinar on GIS & Data Visualizations
- o Viewed Volpe Webinar: The Evolution of VPI During the Covid-19 Pandemic: State DOT Practices and Lessons Learned
- o Viewed AASHTO webinar: The Pivotal Role of Public Involvement in the Surface Transportation
- o Viewed Volpe webinar: Mobility Best Practices and E-Mobility Diversity, Equity, and Inclusion in Accelerating EV Adoption
- o Attended Conference on Virtual Public Engagement for Transportation Planning

### **SUBTASK 1.8 – PROGRAM EVALUATION**

The Corpus Christi MPO reviews and evaluates the work accomplished during the previous fiscal year (FY 2021) under this subtask. This effort provides analysis for lessons learned, best practices and recommendations for future planning, training, and process development. As improvement actions are identified and addressed, it is important that any relevant plans, policies, and procedures are updated accordingly.

The Corpus Christi MPO staff developed an After-Action Report to identify strengths of planning and programming processes that should be maintained and built upon, as well as identifying potential areas for improvement. This specifically included developing/reviewing processes used to develop the Transportation Improvement Program, Metropolitan Transportation Plan and the Congestion Management Program. The effort included a focus on participation techniques and activities taken to comply with Title VI/EJ guidance and requirements, collecting and analyzing data related to minority, low income, limited English proficiency and other populations vulnerable to potential disproportional adverse impacts from the planned transportation system and transportation projects. For each major step in the MTP and TIP processes answers to the following questions are sought:

- What did we want to accomplish?
- How did this change as the process progressed?
- What did the process accomplish?
- Why was there a difference between what we wanted to do and what we did?
- What went well and why?
- What could have gone better?
- What advice would you give yourself if you were to go back to where you were at the start of the project?
- What should we have learned from this project a year from now?
- How do we adapt our processes for a better outcome OR how do we repeat our successes?

Corpus Christi MPO staff performed and completed the following:

- Developed an After-Action Report
- Evaluated the Corpus Christi MPO processes in an effort to fairly distribute the benefits and burdens of transportation investments, eliminate participation barriers, and engage minority and low-income populations in transportation planning decisions.
- Continued implementation and refinement of performance metrics to inform project prioritization and assess the functionality of the regional mobility system overall.
- Webinars/Workgroups/Training
  - o Participated in the TRB 2021 Planning Research Symposium
  - o Viewed General Land Office Technical Advisory Webinar about Meeting the Challenges of Climate Change
  - o Viewed the FHWA and FTA Assessment on the Effectiveness of Performance-Based Planning and Programming Confirmation
  - o Viewed the NITC Webinar: Data-Driven Mobility Strategies for Multi-Modal Transportation
  - o Participated on the AASHTO Standing Committee on Planning - Research Subcommittee
  - o Viewed webinar: Seeking synergies and resolving conflicts between technologies and policies impacting transportation

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**SUBTASK 1.9 – DIRECT EXPENSES**

Direct Expenses are products and services directly related to the operation of the Corpus Christi MPO to deliver the UPWP tasks. Typically, these products and services are paid for directly through purchase orders and contracts, leases, and agreements. These generally include: office rent, fiscal agent services, consultant contracts, external demographic and planning datasets and supporting information, communications costs for leases and equipment, office supplies and equipment purchases or leases, conference expenses, travel costs, paper, computer equipment and IT system components and software and the associated maintenance fees.

**TASK 1 – FUNDING SUMMARY**

Funding Source	Amount Budgeted	Amount Expended	Balance	% Expended
Transportation Planning Funds (PL 112 & FTA 5303)	\$659,000	\$248,991.31	\$410,008.69	37.8%
Local Planning Funds	\$50,000	\$0	\$50,000	0
FTA (Sec. 5309)	\$0	\$0	\$0	0
CMAQ	\$0	\$0	\$0	0
STP MM	\$0	\$0	\$0	0
<b>TOTAL</b>	<b>\$709,000</b>	<b>\$248,991.31</b>	<b>\$460,008.69</b>	<b>35.12%</b>

The MPO staffing levels were 5 of 6 FTEs from October 1, 2020 through September 30, 2021. We kept 1 FTE vacant so we could evaluate our particular needs for the position related to consultant assistance for the remainder of FY 2021.

In FY 2021, we did not have the need to augment the FHWA PL funds with local funds for special projects.

<b>SUBTASK 1.9 BUDGETED EXPENDITURES</b>				
<b>FY 2021 – FY 2022 Direct Expense Revenues by Source</b>		<b>FY 2021</b>	<b>FY 2022</b>	
		<b>Federal Funds</b>	\$408,000	\$403,000
		<b>Other Funds</b>	\$50,000	\$50,000
<b>FY 2021 – FY 2022 Direct Expense Expenditures by Subtask</b>		<b>FY 2021</b>	<b>FY 2022</b>	
<b>Subtask</b>	<b>Direct Expense</b>	<b>Amount</b>	<b>Amount</b>	
<b>1.9 a</b>	Contract Services: Fiscal Agent, Office Rent, Traffic and Special Studies, Consultant assistance as needed	\$408,000	\$408,000	
<b>1.9 b</b>	Printing/Reproduction Services	\$3,500	\$3,500	
<b>1.9 c</b>	Education/Training/Conference	\$4,000	\$4,000	
<b>1.9 d</b>	Travel Out-of-State	\$5,500	\$5,500	
<b>1.9 e</b>	Travel In-State	\$2,500	\$2,500	
<b>1.9 f</b>	Supplies	\$6,000	\$6,000	
<b>1.9 g</b>	Support Services	\$5,500	\$5,500	
<b>1.9 h</b>	Memberships/Subscriptions/Publications	\$2,500	\$2,500	
<b>1.9 i</b>	Maintenance - Software/Equipment	\$5,500	\$5,500	
<b>1.9 j</b>	Capital - Furniture/Equipment	\$15,000	\$10,000	
<b>Direct Expenses</b>		<b>\$458,000</b>	<b>\$453,000</b>	

## TASK 2 – DATA DEVELOPMENT AND ANALYSES

Task 2 included a description of the Corpus Christi MPO's data development and maintenance activities provided under this task. All subtasks listed in the UPWP included a description of each subtask product received, or work accomplished and agency responsible. If work under a subtask was completed by a consultant/subcontractor, this is indicated. If an "amount expended" has exceeded or is below the "amount budgeted" by 25% or more, this is noted in the task funding table and an explanation provided for the variance. Expenditures for FY 2021 were within budgetary limits. Funds remaining in a subtask were rolled over to FY 2022 along with their activities.

### TASK 2 – OVERALL DESCRIPTION

The Corpus Christi MPO intended to develop a systematic data collection or performance monitoring processes sufficient to meet the multitude of federal performance-based planning and programming requirements. The Corpus Christi MPO team updates information describing existing and forecast transportation conditions and other related social, economic, and ecological conditions to support analyses and comparing performance against adopted goals and objectives. The data needed to support the future analyses at a level that allows comparison between individual investments and identification of tradeoffs within investments. There must be sufficient detail on investments to compare their relative effectiveness and identify tradeoffs between investments across the spectrum of goals.

**OBJECTIVE** – The Corpus Christi MPO collected data primarily using collaborative partnerships with member agencies, including local governments, TxDOT, CCRTA, and other partner agencies. When data must be directly acquired, the Corpus Christi MPO uses a 3-tier system to economize collection efforts: Corridors of Concern, Corridors of Note, and Areas of Interest. Gathering socio-economic data, traffic count data, travel speed data, accident surveillance and analysis, infrastructure condition data, and non-motorized and transit usage data provided the information upon which all other planning and programming activities drew. The metropolitan planning process involves extensive use of various forms of data including population, income, household size, employment, car ownership, street configuration, street capacity, traffic counts, bicycle counts, and land use. Collecting data on traffic conditions, roadway conditions, and system users are vital components of efficient and effective performance-based processes. Data helps leaders make informed investment decisions regarding investments into roadway maintenance and expansion priorities and can even feed into other technologies to provide real-time feedback and help maximize operational performance. Data can also keep travelers informed and safe. Examples of data used every day in transportation planning include cellular and Bluetooth data, which can record travel times, travel direction, and provide information about trip origin/destination. Inductive loop detection, video vehicle detection, and Bluetooth detection can provide accurate counts of vehicles and bicycles using a facility. These technologies can also assist signal timing, alerting signals when users are approaching or at an intersection. More recently, communities have begun investing in fiber-optic networks to help connect the data driven components of the transportation network.

**METHODOLOGY** – The Corpus Christi MPO is committed to monitoring performance of the transportation system at both the regional scale and corridor scale and using our findings to inform and prioritize both capital investments and implementation of policies that impact transportation. This work task is needed to monitor area travel characteristics and factors affecting travel such as socioeconomic, community and land use data, transportation system data, natural, physical, and human environmental concerns and issues in the Corpus Christi Metropolitan Area. Task 2.0 maintained and expanded the transportation, socioeconomic, environmental, and land-use data and encompassed the development of models to forecast future conditions. The data supported statistical analyses for a wide variety of performance-based planning activities.

### SUBTASK 2.1 – MPO GEOGRAPHIC INFORMATION SYSTEM (GIS) DATABASE MANAGEMENT

This subtask allowed staff to manage and update the GIS database as part of the MPO's continuous planning process. Data for state and national performance measures were collected and updated annually. Data for regional performance measures (i.e. measures used to evaluate the performance of the metropolitan transportation system overall) is also collected and updated annually. Project scale performance measures (i.e.

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those used to prioritize capital investments on individual corridor segments) are updated at a minimum of every two years to inform project selection in conjunction with updates to the TIP, or as needed to guide regional decision-making. There were efficiencies that were gained by coordinating this data collection. The Corpus Christi MPO needed to use financial resources to acquire data directly. Examples included the hiring of firms to collect data and conduct surveys as occurred in the past. This is especially effective when done in conjunction with the 2020 US Census, unfortunately, the Census information was not available in the time anticipated due to the ongoing pandemic. It could also take the form of purchasing regionally specific data from one or more of the “Big Data” compiler agencies.

A brief list of these sources\* included:

- Crash Record Information System
- Statewide Traffic Analysis Reporting System
- <https://tti.tamu.edu/>
- <https://www.cattlab.umd.edu/>
- <https://www.streetlightdata.com/>
- <https://www.airsage.com/>
- <http://inrix.com/>
- <https://www.innovarytech.com/turning-movement-counts/>
- <https://www.here.com/products>
- <https://mysidewalk.com/>
- <https://www.waze.com/>
- [https://www.tomtom.com/en\\_gb/traffic-index/](https://www.tomtom.com/en_gb/traffic-index/)
- <http://www.ihsglobalinsight.com/ProductsServices/ProductDetail838.htm>

\*Listing these companies in no way, shape, or form, suggests that the Corpus Christi MPO advocates or endorses their work. This is for information purposes only.

The Corpus Christi MPO acquired, aggregated, reviewed, and formatted data in a geospatial format to inform internal planning processes and the activities of the broader planning community. Analysis of the 2020 census demographic (population only available) and land use data were performed for the geographic distribution and aggregation. The Corpus Christi MPO coordinated with local and state agencies to develop trend data on changes in land use through the analysis and review of existing demographic data.

### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Maintenance of GIS databases that incorporate the most current data available from various sources, including, American Community Survey data from the Census Bureau, Texas Demographic Center, Crash Records Information System, etc.
- Maintenance of the Corpus Christi MPO developed web mapping applications and story maps relating to various Corpus Christi MPO planning documents and datasets, including the Strategic Plan for Active Mobility, Traffic Count Portal, etc.
- Began development of an MPO Open Data website.
- Coordinated with TxDOT to convert the 2016-2045 travel demand model network into a master network that complies with TxDOT formatting that is essential for future model development.
- Participated in AMPO Emerging Technologies Working Group
- Participated in AMPO Data Working Group
- Participated in COMPAT Peer Exchange
- Viewed Census Bureau Briefings
- Participated in AASHTO - Urban Areas for the 2020 Census - proposed criteria discussion
- Coordinated with consultant (Cambridge Systematics) to begin development of the 2021 and 2050 Travel Demand Model databases.

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- Developed an enhanced GIS database that supported the review of projects within the MTP, TIP, and CMP to assist in prioritizing projects.
- Presented at and attended the AMPO Peer Exchange on GIS and Equity

### **SUBTASK 2.2 – TRAVEL DEMAND AND CORRIDOR MODEL DEVELOPMENT AND UPDATE**

The Corpus Christi MPO staff coordinated with TxDOT to update the regional Travel Demand Model and develop meso- and micro-scale corridor models as appropriate to assist with Congestion Management Process enhancements and Transportation System Management Operations that improve efficient traffic flows. A consulting firm was hired to possibly acquire travel volumes, travel speeds, origin and destination information, anonymized routing information, and turning movement counts to aid planning and forecasting processes. These counts, and counts from other agencies, are coded into various models to aid analyses of conditions, needs and solutions. Implementation of the Travel Demand Model enhancements including dynamic traffic assignment, time-of-day, intersection control, tours, land use, and transit information were evaluated for inclusion in the next update.

- The 2019 CMP identified turning movement counts as a priority effort. In the past, Corpus Christi MPO hired consultants to acquire turning movements at key intersections throughout the region as part of the Regional Traffic Signal Coordination Plan. Beginning in either FY 2021 or FY 2022 (This did not occur in FY 2021), and continuing at regular intervals as needed, the Corpus Christi MPO will acquire peak hour and off-peak turning movement counts.
- Participated in AMPO Emerging Technologies Working Group
- Participated in AMPO Data Working Group
- Participated in COMPAT Peer Exchange
- Viewed Census Bureau Briefings that were released bi-annually.

#### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Reviewed TxDOT 5-year saturation traffic count locations and proposed additional sites based on growth since 2016.
- Converted the 2016-2045 travel demand model from version 2.4 of TexPACK to version 2.5.
- Coordinated with TxDOT, partner agencies, and consultants to refine the 2021 Urban Saturation count locations.
- Coordinated with TxDOT and consultants to begin the process of developing the new 2021-2050 travel demand model.
- Viewed NCHRP Forum on Technology and Transportation
- Participated in webinar on ActivitySim in medium and small MPOs
- Viewed a webinar on Vistro and meso-level modeling at the regional level
- Attended Virtual Texas Model User Group meeting

### **SUBTASK 2.3 – SOCIO-ECONOMIC ALLOCATION MODEL DATA ACQUISITION AND CALIBRATION**

Reviewed local land use files, property information, employment information and U.S. Census databases and update databases as needed. Develop population, income, household, and employment data that are used in the Corpus Christi MPO's planning and forecasting processes. Explored and implement with consultant help, an advanced allocation model such as UrbanSim.

The socioeconomic database was compiled and updated using local land use files, property information, employment information and U.S. Census materials such as American Community Survey (ACS), Woods and Poole forecasts, and other information as required.

#### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

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- Approved the initial scope of work for 2020 socio-economic allocation with consultant Freese and Nichols. Opened discussions with UrbanSim corporation for use of their model to allocate households and jobs in the region.
- Collected and compared socio-economic data from various sources including Woods and Poole, the Texas State Demography Center, the Texas Water Board, and other local entity studies.
- Attended Texas State Demography Conference
- Participated in webinar on useability of UrbanSim in allocating households and jobs

### SUBTASK 2.4 – CRASH DATA ACQUISITION AND CRASH MODEL CALIBRATION

Unlike other performance measures applicable only to the National Highway System (NHS), the safety performance measures apply to all public roads. The Corpus Christi MPO acquired Vision Zero Suite, a tool to analyze accidents that occur on all roads throughout the region using the CRIS database that is maintained by the Traffic Safety Division of TxDOT. Activities also included initiating a regional Safety Task Force and communications with the Statewide TxDOT/MPO Safety Task Force.

#### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Contracted for Crash Data Analysis with DiExSys Vision Zero Suite software and received initial overview of its capabilities.
- Initiated a Regional Safety Task Force discussion with the Technical Advisory Committee.
- Began coordination to participate on the Statewide TxDOT/MPO Safety Task Force

### SUBTASK 2.5 – INFRASTRUCTURE CONDITION DATA AGGREGATION AND ANALYSES MODELS

The public clearly wants good roads, but lacking a rigorous forecast of pavement conditions, while there is a forecast of congestion conditions, creates an unbalanced system and impacts public and elected official opinions. The Corpus Christi MPO staff began discussions to acquire infrastructure condition data from local and state sources. This data will be integrated into a calibrated regional HERS-ST model that uses engineering concepts to identify deficiencies and apply economic principles to determine the outcome of different investment strategies.

HERS–ST can estimate future pavement conditions for specific investment levels, it can also evaluate the impacts of alternative types of investment strategies, develop scenarios for the best use of a limited amount of funds, and determine what the total cost is to completely repair and maintain all roads in the region in 5-, 10-, and 25-year increments.

#### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Initiated conversations with TxDOT, the City of Corpus Christi and the City of Portland about transferring pavement condition data for use in developing a regional HERS model.

### TASK 2 – FUNDING SUMMARY

Funding Source	Amount Budgeted	Amount Expended	Balance	% Expended
Transportation Planning Funds (PL 112 & FTA 5303)	\$172,000	\$115,778.23	\$56,221.77	67.31%
Local Planning Funds	\$0	\$0	\$0	0
FTA (Sec. 5309)	\$0	\$0	\$0	0
CMAQ	\$0	\$0	\$0	0
STP MM	\$0	\$0	\$0	0
<b>TOTAL</b>	<b>\$172,000</b>	<b>\$115,778.23</b>	<b>\$56,221.77</b>	<b>67.31%</b>

## TASK 3 – SHORT RANGE PLANNING

Task 3 included an overall description of the Corpus Christi MPO’s short range planning activities. This task included all subtasks listed in the UPWP with a description of each subtask product received or work accomplished and agency responsible. If work under a subtask was completed by a consultant/subcontractor, this is specified. If an “amount expended” exceeded or is below the “amount budgeted” by 25% or more, this is noted in the task funding table and an explanation must be provided for the variance. Expenditures were within budgeted limits. Any funding in a task that was underspent, it was rolled over into the FY 2022 UPWP along with the tasks to be performed.

### TASK 3 – OVERALL DESCRIPTION

The process of building, operating, maintaining, and reconstructing the region's surface transportation system is complex and demands ongoing metropolitan planning efforts. The activities described in this task depend upon collaborative and coordinated information and decision-making processes among state and local government agencies, transportation providers, and the users of the regional system. The cooperation among all these stakeholders simplifies and harmonizes metropolitan transportation planning efforts and lead to greater mobility and accessibility benefits.

**OBJECTIVE** – In addition to maintaining a TIP that outlines a four-year schedule of transportation improvements for the study area and reflects the planning priorities of federal legislation, the Corpus Christi MPO carried out various planning studies to assess the need for other projects that have not yet been identified in the MTP or TIP. Such studies functioned to guide capital investments and project prioritization by municipalities and other entities in the MPO area.

### METHODOLOGY

- Maintenance of an up-to-date FY 2021-2024 TIP
- Creation of the FY 2023-2026 TIP
- Identify EJ/Title VI funding and project list in the TIP and MTP
- Acquisition and compilation (annually) of myriad Performance Metric data—including seven congestion-specific metrics—relating to eight Performance Measurement topics and four regional Goal Areas, per the MPO’s performance-based planning framework, as defined in the CMP. These data, which are acquired from multiple sources, are used to prioritize capital projects and assess the functionality of the regional transportation network, including evaluating the severity of congestion
- Collaboration with local partners to collect freight origin/destination data to augment the existing hazardous materials commodity flows dataset
- Participating in the update to the Coastal Bend Regional Coordination Plan
- Pursuing becoming the coordinating agency for the Coastal Bend Regional Coordination Plan
- Compilation of traffic count data from various multiple sources to inform the evaluation of the degree of congestion on various segments
- Reviewed development process for the TSMO / ITS Architecture Plan
- Active and Micro-mobility Transportation Planning
- Regional Freight Planning
- Transit Coordination
- Regional and Project Economic Analyses Whitepaper
- Infrastructure Lifecycle Analysis Report
- Crash Analysis and Incident Management Planning

**SUBTASKS** - The subtasks are listed in detail on the following pages.

Subtask 3.1 Transportation Improvement Program (TIP) Update

Subtask 3.2 CMP/TSMO/ITS Architecture Plan

Subtask 3.3 Active and Micro-mobility Transportation Planning



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Subtask 3.4 Regional Freight Planning

Subtask 3.5 Transit Coordination

Subtask 3.6 Economic Analyses of Projects and Portfolios

Subtask 3.7 Infrastructure Lifecycle Analysis and Reporting

Subtask 3.8 Crash Analyses and Traffic Incident Management Planning

Subtask 3.9 Coordinated Public Transit – Human Services Transportation Plan Update

### **SUBTASK 3.1 – TRANSPORTATION IMPROVEMENT PROGRAM (TIP) UPDATE**

One of the primary responsibilities of the Corpus Christi MPO is developing a Transportation Improvement Program (TIP). The TIP includes all transportation projects within the Corpus Christi Metropolitan Planning Area for which federal and/or state funds is used, as well as all projects that have regional significance and are funded using local or private funds. The Corpus Christi MPO staff maintained and amended the FY 2021-2024 TIP to reflect changes in area priorities, scope, accessibility, and funding for roadways and transit projects. A cooperative interagency input process was part of the public involvement component of this task.

Future project applications provide, in an easily understood manner and with sufficient detail, the design concept and scope descriptions of all existing and proposed transportation facilities to permit development of cost estimates for major transportation investments for which analyses are not complete. The application shall identify study corridors and subareas and may stipulate either a set of assumptions (assumed alternatives) concerning the proposed improvements or a no-build condition pending the completion of a corridor or subarea level analysis under Sec. 450.318, sufficient descriptive material (i.e., type of work, termini, length, etc.) to identify the project or phase.

An important and challenging effort is refining the decision support system to reflect adopted regional priorities and aid allocating funds to those projects and programs. The Corpus Christi MPO also monitored the delivery of capital projects to support on-time and on-budget construction. Another focus was on developing priority projects to the level that allows the Corpus Christi Metropolitan area to compete nationally for discretionary funds.

This task also produced the required system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the adopted performance targets including progress achieved by the metropolitan planning organization in meeting the performance targets in comparison with system performance recorded in previous reports; and an analysis of how the preferred investment scenario has improved the conditions and performance of the transportation system and how changes in local policies and investments have impacted the costs necessary to achieve the identified performance targets.

#### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Refined the Corpus Christi MPO approach to projects that are grouped in the TIP
- Maintained an up-to-date FY 2021-2024 TIP by processing technical changes as necessary as well as administrative amendments and Transit amendments based on new FTA funding awarded in FY 2021
- Developed Amendments to the FY 2021-2024 TIP as articulated on the website pages illustrating the process and public meetings and TAC and TPC recommendations and approvals
- Coordinated with TxDOT-CRP and Corpus Christi Regional Transportation Authority to make the amendments to FY 2021-2024 TIP, submitted required documentations through TxDOT's eSTIP portal
- Identified and documented roadway projects being accomplished by local governments and agencies to gain an understanding of the projects and determine if the nonfederal project should be amended into the existing current TIP or wait for inclusion in the next TIP
- Removed funding from three projects that were not moving forward in a timely manner
- Attended hands on web training on how to use Decision Lens to prioritize projects
- Attended hands on web training on how to use Decision Lens with Performance Metrics
- Viewed presentation on Multiple Objective Decision Analysis

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### **SUBTASK 3.2 – CMP/TSMO/ITS ARCHITECTURE PLAN**

The Corpus Christi MPO is working toward convening a CMP Committee and enhancing the ITS Architecture Plan and ITS Strategic Implementation Plan to include current technologies, along with connected and autonomous vehicle systems. After completion of the updated travel models, each Corridor of Concern from the adopted CMP shall be evaluated for short, medium and long-range planning horizons based on capacity and operations as compared to expected demand. Corridors of Note are evaluated as appropriate.

This effort is tentative pending development of the regional draft ITS plan by the TxDOT CRP District office. The Corpus Christi MPO staff reviewed other ITS plans from MPOs in the country to get a sense of the scope of the upcoming regional ITS Plan being drafted by the TxDOT CRP District. Some of the staff funds for this task were rolled over to FY 2022. Once the draft is received by the MPO, performance shall be measured using adopted goals and performance metrics. The process will result in a list of roadway segments that have deficiencies when evaluated using adopted metrics for both existing conditions and forecast future conditions, using updated models and information. The relatedness of individual facilities to a corridor should be tested by changing network features and reviewing impacts to other facilities. The effort will include evaluating recurring and non-recurring congestion as part of the overall evaluation of the regional transportation network. The Corpus Christi MPO staff will work with cognizant agencies to identify cost effective interventions, based on the adopted Congestion Management Program, to address these “identified deficiencies.”

The 2020 CMP established a systematic process that provides information on transportation system performance and alternative strategies to alleviate congestion and enhance the safety and mobility of people and goods in the Corpus Christi Metropolitan Area. Modern roadway operations are driven primarily through advancements in technology, though proper planning and physical projects may play a role as well.

The Intelligent Transportation System (ITS) Architecture plan, once developed and refined will identify technologies to improve mobility, increase safety, and reduce delays.

#### Work Performed and Status

Corpus Christi MPO staff performed and completed the following in FY 2021:

- Participated in internal meetings to review other MPO’s TSMO efforts and their participation groups. We anticipate that our local efforts will include the TxDOT-CRP, the City of Corpus Christi, Nueces County, and the CCRTA. Our salary expenditures were used to review/discuss the possible draft TSMO Plan and the Capability Maturity Framework model. Funds for this task were part of the roll-over funds for FY 2022
- Identified possible access management improvement opportunities to address congestion by reviewing local government corridor studies and project development processed. Also met with the City of Corpus Christi Traffic Engineering staff to review their traffic operation center and pavement management system implementation
- Identified transportation and traffic improvements that are effective and efficient while enhancing safety and minimizing social and environmental impacts as part of updating the Corpus Christi Area Development Plans (ADPs), CIP plans, Master Plans, and implementation of transportation projects.
- Viewed Exploring Speed Management in the US and Abroad webinar
- Viewed Webinar - Complete Trip - ITS4US Deployment Program ConOps: ARC
- Viewed Webinar - Complete Trip - ITS4US Deployment Program ConOps: Buffalo
- Viewed TxDOT Corpus Region TSMO Program Plan - Capability Maturity Framework (CMF) Preview
- Received notice of a TSMO Group that is comprised of TxDOT-CRP, the City of Corpus Christi, Nueces County, CCRTA and discussed forthcoming Capability Maturity Framework model.

### **SUBTASK 3.3 – ACTIVE AND MICRO-MOBILITY TRANSPORTATION PLANNING**

The Corpus Christi MPO strives to reflect non-vehicular and micro-mobility modes of transportation in its transportation planning. This subtask continues to build on the work previously conducted and ensures that the MTP and TIP for the Corpus Christi MPO shall provide for “...the development and integrated management and operation of transportation systems and facilities (including accessible pedestrian walkways and bicycle

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transportation facilities) that functions as an intermodal transportation system in the metropolitan planning area and as an integral part of an intermodal transportation system for the State and the United States.” USC 49 Section 5303c(2).

### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Developed the Surface Transportation Block Grant Set-Aside (STBG-SA) Program Guidance and Procedure that laid out the eligible entities, projects, responsibilities of sponsor agency, project selection process, and so forth.
- Held internal discussions to review the Category (CAT) 9 Transportation Alternative Set-aside projects for FY 2021 through FY 2024 as part of the new FY 2021-2024 TIP that was completed.
- Revoked the City of Corpus Christi FY 2018 Region-wide Bike Blvd Wayfinding Initiative and returned the funds for the 2022 MPO, STBG-SA (CAT 9) project selection process.
- Processed a TIP Amendment for the Cat 9 FY 2017 Portland Bicycle Lanes to FY 2020 (per TxDOT request) for Advanced Funding Agreement (AFA).
- Researched the status of TASA funds and prior awards to coordinate information with TxDOT for possibly lapsing federal funds. No lapsing funds were identified for FY 2021.
- Participated on AMPO Active Transportation Working Group
- Attended TxDOT's virtual Bicycle and Pedestrian Advisory Committee (BPAC)

### **SUBTASK 3.4 – REGIONAL FREIGHT PLANNING**

Safe and efficient multi-modal freight mobility is a cornerstone of the regional economy. Expanding rail capacity, enhancing trucking safety, and bolstering the nexus between modes are Corpus Christi MPO priorities. The Corpus Christi MPO staff works with TxDOT, the Port of Corpus Christi and other significant freight stakeholders to update the designation of national freight network routes in the region. The Corpus Christi MPO also continues to collaborate with regional emergency management partners to explore strategies for mitigating risk associated with freight operations in the face of industrial growth.

### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Considered strategies for enhancing freight efficiency and minimizing risk on the Harbor Bridge Replacement Project.
- Informed TAC of FHWA and Center for Transportation Excellence (CTE) teleconference workshops and webinars related to freight issues, transportation technology, and safety for member agencies and interested public. Provided the TAC with updates to Texas Port CIP projects related to our local Port of Corpus Christi system as well as statewide activities at other Ports as examples of freight planning. Additionally, updates on freight activity in the MPO area and the broader Texas area in general as well as part of the global pandemic that severely impacted freight operation in our region, the state, country and internationally.
- Continued collaboration with regional partners to collect freight origin/destination data to augment the existing Hazardous Material Commodity Flow data set to inform whether to voluntarily undertake a routing process for non-radioactive hazardous materials (NRHM).
- Continued collaboration with the Port of Corpus Christi to promote the PCCA's truck queuing project on the Joe Fulton International Trade Corridor as a regional case study. Additionally, reviewed citizen comments and city planning process comments related to truck parking in the areas surrounding the Port of Corpus Christi and especially the North Beach area.
- Viewed Panama Canal/Panamax Webinar

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### **SUBTASK 3.5 – TRANSIT COORDINATION**

The Corpus Christi MPO strives to support transit services that enhance regional economic growth and universal access to goods and services. The Corpus Christi MPO continued to participate and provide technical support to Corpus Christi Regional Transportation Authority (CCRTA) in an attempt to ensure that plan recommendations are consistent with current needs and resources of public providers, private providers, and the health and human services community. This is an ongoing task with Corpus Christi MPO staff serving as an engaged stakeholder in the process.

The Corpus Christi MPO maintains active engagement with CCRTA Operations and Planning departments. The MPO remains committed to supporting the Regional Public Transportation Coordination Plan, from the Transportation Coordination Network of the Coastal Bend (TCN).

#### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Technical assistance to regional partners in the interest of sustaining initiatives outlined in the Regional Public Transportation Coordination Plan.
- Technical assistance in support of the CCRTA's Comprehensive Operational Analysis to implement innovative Flex Route services, streamline route alignments, improve travel time, and evaluate operational efficiencies in all aspects of CCRTA operations to increase ridership levels. Worked with the travel demand model consultant for the City of Corpus Christi to host a workshop on an enhanced prototype travel model that had input into a regional transit demand forecasting tool.
- Continued collaboration with CCRTA and Texas A&M University - Corpus Christi to promote a collaborative autonomous campus shuttle pilot project as a regional case study. Due to the COVID-19 pandemic, this service was suspended in FY 2021.
- Participated with the CCRTA Board of Directors, Committees and staff on their projects and programs as well as budget development.
- Assisted CCRTA staff in the development and public processes for the FY 2021-2024 TIP Amendments through TxDOT and FHWA/FTA.
- Tracked ridership and regional impacts to services related to the pandemic to discussed with CCRTA staff of any strategies or marketing ideas that could assist the system operations.
- Viewed the Texas Innovation Alliance webinar on Rapidly Advancing Automated Transit
- Viewed TxDOT's virtual Public Transportation Advisory Committee (PTAC).

### **SUBTASK 3.6 – ECONOMIC ANALYSIS OF PROJECTS AND PORTFOLIOS**

The Corpus Christi MPO staff works with consultants to develop appropriate econometric model(s) to complete analyses of potential economic impacts/benefits of both individual projects and portfolios of projects in the region. Planning and promoting economic development is important in developing and sustaining a strong and vibrant community. It is important for the Corpus Christi MPO to collaborate with agencies throughout the region to encourage economic growth, be responsive to the needs of the business community, and work to strengthen the region's position in attracting and retaining businesses. However, those efforts must be undertaken within the context of sustaining what the region already enjoys – a tight-knit community with a rich history and vibrant culture.

Investment decisions are typically based on analyses of benefit-cost analysis (BCA), and/or cost-effectiveness analysis (CEA), to appraise economic viability. Increasingly BCA or CEA are complemented by multicriteria analysis (MCA) to capture the multiple dimensions that affect decision-making – social, economic, environmental, and financial. For projects evaluated and financed by federal agencies, TxDOT, or the Corpus Christi MPO, guidelines are available for economic analysis of investment projects.

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### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- As part of the 2050 MTP development process, we acquired and compiled a myriad of Performance Metric data—including seven congestion-specific metrics per the MPO’s performance-based planning framework, as defined in the CMP. These datasets, which are acquired from multiple sources, were used to assess capital projects and the functionality of the regional transportation network, including evaluating the severity of congestion.
- Assessed possible revisions to the current CMP with enhancements added throughout FY 2021 as new information and exhibits were updated as part of the continuous CMP efforts.

### **SUBTASK 3.7 – INFRASTRUCTURE LIFECYCLE ANALYSIS AND REPORTING**

The need to maximize the benefits of limited funding and stabilize budgets is particularly acute for the preservation of infrastructure. TxDOT and local agencies are grappling with the fact that many critical bridges, roadways, and drainage networks need substantial repair or replacement. Maintenance, upgrades, and replacements are a growing need, and with limited resources it is even more important that decisionmakers prudently plan and spend current and future budgets. When the cost of a project is estimated only for design and construction, the long-term costs associated with maintenance, operation, and the reconstruction of a project are often overlooked. Similarly, comparing project design alternatives by their initial costs can lead to shortsighted decisions. Without careful examination of the full life cycle costs, investment decisions today could cost an agency even more in years ahead. Something as simple as a bridge replacement provides the opportunity to construct an asset, sometimes with higher upfront costs, in a way that reduces the needs for future revenues dedicated to that asset, often referred to as “sustaining capital.” A poor choice today can be amplified in future decades as the inflexible and long-life nature of infrastructure can create unaffordable requirements in the future.

This subtask proposes to utilize the HERS-ST model contemplated in Task 2.5 and other studies to begin approximating the lifecycle burden of the transportation infrastructure in the region, with a focus on the NHS. Development of the HERS-ST model was delayed from FY 2021 UPWP subtasks and rolled over into the FY 2022 UPWP subtasks. Eventually the HERS-ST model will produce a description of the condition of the assets and the costs of operations and maintenance activities. Performance deficiencies are identified, and lifecycle cost analysis can suggest potential investment strategies for local entities to undertake. In combination with the financial planning, this can encourage conversations about long-term goals, issues, opportunities, and revenue needs. Initiated discussions with contracted consultants on developing HERS-ST for the Corpus Christi region and with the City of Corpus Christi for pavement condition data.

### Work Performed and Status

This task was delayed in the FY 2021 UPWP and rolled over to the FY 2022 UPWP subtasks.

Corpus Christi MPO staff performed and completed the following:

- Reviewed the applicability and timing of the HERS-ST model development within the FY 2021 time period given the impact of data availability and timing associated with the development of the 2050 MTP.
- Met internally and spoke with consultants to confirm that this subtask is not ready to proceed at this time. The subtask was deferred to the FY 2022 UPWP.

### **SUBTASK 3.8 – CRASH ANALYSIS AND TRAFFIC INCIDENT MANAGEMENT PLANNING**

This subtask comprises the rigorous analysis of crashes on all public roads in the region. The activities include participation in multi-disciplinary safety initiatives at the local, state or national levels to address traffic safety in a holistic manner; research and analysis of crash data from TxDOT’s Crash Record Information System (CRIS) and coordination of trainings and workshops on safety related issues for agencies and regional implementers, if available or needed.

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A complete regional study of fatal and serious injury crashes is undertaken, documenting regional trends and influencing factors. Emphasis begins with implementing systemic operations and engineering improvements but may include assisting enforcement activities. It identifies different categories of factors from the regional TDM: accident exposure factors, socio-economic factors and network factors.

The Corpus Christi MPO explored using a regional safety committee to investigate strategies to address identified issues. This ad hoc committee helps inform local planning and programming efforts to improve transportation safety and achieve/exceed the region's roadway safety targets.

A site-specific phase explores various strategies to address locations with unusual characteristics. This effort helps inform local planning and programming efforts to improve transportation safety and achieve/exceed the region's roadway safety targets.

FHWA encourages the MPOs to consider Traffic Incident Management (TIM) activities as part of their UPWPs. TIM directly supports multiple planning factors related to safety, mobility freight movement, air quality and transportation system reliability. TIM addresses the non-recurring congestion which causes delay that impacts all travelers, including just in time freight haulers. TIM also improves safety by reducing the likelihood of a secondary crash and responders being struck. Furthermore, TIM impacts the economy by reducing delay that impacts consumers, and results in wasted fuel. The Corpus Christi MPO may in the future

- Propose TIM to elected officials
- Facilitate TIM Responder Training
- Facilitate working groups and activities
- Foster relationships with private haulers and Law Enforcement Agencies
- Facilitate After Action Reviews
- Fund ITS Projects
- Compile data for Performance Measures

### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Began the process with a consultant team to conducted traffic crash data analysis by using DiExSys Vision Zero Suite software to identify the safety issues in the region.
- Worked to create a Regional Traffic Safety Task Force that is comprised of multi-agencies for collaborating efforts to address the safety issues in the region and Safety Performance Measures (PM1).
- Viewed TIA - TMC Operations & Preparedness
- Viewed webinar - 3 Technologies That Are Helping Agencies Hit Their Vision Zero Goals

### **SUBTASK 3.9 – COORDINATE PUBLIC TRANSIT – HUMAN SERVICES TRANSPORTATION PLAN UPDATE**

Multiple local, state, and federal programs from the United States Departments of: Agriculture, Education, Health and Human Services, Veterans Affairs fund or support transportation services for their clients. Many of these "human service transportation" funding programs are independent from the transportation funding and services provided by the U.S. Department of Transportation - Federal Transit Administration (FTA). Because of the variety of different missions, agency rules, federal regulations, and bureaucratic processes, human service and public transportation programs are not always mutually supportive or coordinated. The lack of coordination results in duplication of some systems and programs and overly complex, expensive, and difficult to understand rules for use. The goal of coordination planning is untangling the separate systems and encouraging agencies and programs to complement each other and work towards an accessible, easy to use system.

As a practice, mobility management emphasizes the coordination of transportation services to enhance the mobility and special needs of seniors and individuals with disabilities, older adults, and others with barriers to transportation. As stipulated in Federal Transit Administration (FTA) Circular 9070.1G the current Coordinated Public Transit - Human Services Transportation Plan (CPTHSTP) must identify the transportation needs of individuals with disabilities, seniors and people with low incomes; provide strategies for meeting those local

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needs; and prioritize transportation services and projects for funding and implementation. This plan serves two primary purposes: guide the programming process for FTA Section 5310 funding, and provide guidance to enhanced mobility providers on how to best advance the mobility independence of older adults, individuals with disabilities, low-income populations and veterans in the Corpus Christi Urbanized Area. This effort emphasizes coordination among all the key players including public transit providers, private operators, and volunteer driver programs. It also includes the customers, staff, and stakeholders from human services and health care agencies.

The Corpus Christi region is working to more fully incorporate mobility management into planning processes to help ensure that decisions on funding transportation projects can result in more equitable distribution of services, facilities and resources. The Corpus Christi MPO staff fulfills requirements related to the 5310 Program: Enhanced Mobility of Seniors and Individuals with Disabilities, including participating in a regional rating and ranking committee for the program. The performance measures included in the updated Coordinated Public Transit - Human Services Transportation Plan required the collection of quantitative and qualitative information, as available, concerning modifications to the geographic coverage of transportation service, the quality of transportation service, or service times that increase the availability of transportation services for seniors and individuals with disabilities; ridership; and accessibility improvements.

### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Discussed with TxDOT the possibility of becoming the Region 20 lead agency for the Coordinated Plan
- Participated in the TxDOT-led, consultant (TTI) developed plan process to create the Coordinated Plan focusing on the impacts within the Corpus Christi MPO boundaries.
- Viewed Webinar: Improving Access for All: Bringing On-Demand Technology to Paratransit
- Viewed the National Aging and Disability Transportation Center webinar on Meeting the Transportation Needs of Diverse Older Adults and People with Disabilities
- Viewed webinar on Rural Transportation & Medical Access

### **TASK 3 – FUNDING SUMMARY**

Funding Source	Amount Budgeted	Amount Expended	Balance	% Expended
<b>Transportation Planning Funds (PL 112 &amp; FTA 5303)</b>	<b>\$181,000</b>	<b>\$136,721.43</b>	<b>\$44,278.57</b>	<b>75.54%</b>
Local Planning Funds	\$0	\$0	\$0	0
FTA (Sec. 5309)	\$0	\$0	\$0	0
CMAQ	\$0	\$0	\$0	0
STP MM	\$0	\$0	\$0	0
<b>TOTAL</b>	<b>\$181,000</b>	<b>\$136,721.43</b>	<b>\$44,278.57</b>	<b>75.54%</b>

## TASK 4 – METROPOLITAN TRANSPORTATION PLAN (MTP) UPDATE

Task 4 included an overall description of the Corpus Christi MPO’s metropolitan transportation plan development activities. Included are all subtasks listed in the UPWP with a description of each subtask product received or work accomplished and agency responsible. If work under a subtask was completed by a consultant/subcontractor, this is indicated. If an “amount expended” has exceeded or is below the “amount budgeted” by 25% or more, this is noted in the task funding table and an explanation provided for the variance. For FY 2021 this task was completed within the budgetary limits. Activities not completed in FY 2021, were rolled over into the FY 2022 UPWP.

### TASK 4 – OVERALL DESCRIPTION

Task 4.0 reflects efforts in support of developing and maintaining the 25-year Metropolitan Transportation Plan (MTP). Key activities for FY 2021 were evaluating the process used in the future MTP development and proposing improved methodologies; and anticipating potential impacts from new federal legislation. Initial activities for the 2050 MTP began during this FY 2021 UPWP time-period. Development of the 2050 MTP has several subcomponents inherent in an update, including:

- Demographic Forecasts/Small Area Forecast
- Congestion Management Process
- Regional ITS Plan
- Regional Freight Plan
- Transit Plan (in coordination with CCRTA)
- Specialized Transit Plan (in coordination with Coastal Bend COG and CCRTA)
- Regional Nonmotorized Plan
- Regionally Significant Corridor Studies
- Transportation System Reporting and Needs Identification Studies

**OBJECTIVE** – The Corpus Christi MPO performed preparatory and early long-range and regional transportation planning activities to support developing, maintaining and implementing the metropolitan transportation plan; and participate in local and statewide transportation planning and coordination efforts

**METHODOLOGY** – Corpus Christi MPO staff supported implementation of the preferred strategies within the developing 2050 MTP activities. These included:

- Non-motorized (bicycle and pedestrian) planning;
- Participated on transportation Task forces;
- Technical support and coordinating transportation plan development with ongoing local transportation planning activities;
- Pursued innovative funding strategies to accelerate needed improvements;
- Participated in statewide and MPO regional long-range transportation planning activities;
- Provided transit planning assistance to member entities;
- Continued coordination for implementation of the recommendations from the Specialized Transportation and Transit Plans;
- Continuing coordination with TSMO/ITS Subtasks;
- Prepared and processed draft amendments to the 2045 MTP, if necessary; and
- Prepared the Metropolitan Systems Performance Report update

### SUBTASK 4.1 – REFINE VISION AND GOALS

While most transportation plans involve the public and stakeholders in defining a vision, a performance-based plan requires clear agreed-upon goals and objectives, since the strategic direction of goals and objectives are used to define performance measures. Consequently, it is critical for public involvement and stakeholder engagement to have a forum for rationally discussing priorities and trade-offs. These discussions lead to developing and selecting achievable targets and in defining desired outcomes. In a performance-based plan, the public and



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stakeholders are involved in not just providing general concepts, but clearly defining or prioritizing goals and specific objectives, which leads to performance measures and achievable targets that are used in assessing plan options and/or selecting investments.

The Corpus Christi MPO staff planned to bring together stakeholders with in-depth knowledge of transportation and community related goal areas to refine the goals and objectives in the 2050 MTP. The goals and objectives of other agency plans inform the development of the goals and objectives of the transportation plan. The process of developing the transportation plan encourages decision-makers and the public to explore goals and objective from different plans, identify potential conflicts and commonalities, and create a prioritization system.

### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Technical support to partners that facilitated effective use of the data generated by the updated model
- Provided technical support to consultant for the development and completion of the MPO's updated Travel Demand Model with a 2016 base year and 2045 forecast year.
- The MPO staff reviewed the enhancements of the City of Corpus Christi's consultant developed enhanced travel demand model as a possible core update request for future model enhancements for the next 2050 MTP.
- Viewed Transportation Equity at USDOT - Information Session Webinar
- Viewed TRB Webinar: Addressing Justice in Transportation
- Viewed Volpe webinar: Strategies to Overcome Transportation Barriers for Rent Burdened Residents

### **SUBTASK 4.2 – REFINE PERFORMANCE MEASURES AND EVALUATION CRITERIA**

Selecting performance measures in a performance-based plan is often thought of as a “data-driven” process. The public and stakeholders play a critical role in defining performance measures. It is important to work with the public and stakeholders to clearly define what is important and meaningful to them. Engaging participants helps define what is meant by different objectives and what metric is most appropriate. Goals associated with mobility, accessibility, and quality of life manifest themselves in different ways, and stakeholders have different views of what different terms mean. Working with stakeholders to define how to measure performance helps to clarify what is most critical to the public and guides the analysis of strategies in the plan. The materials produced actively and continuously strive to use plain language and to ensure that measures used in the plan are understood by the stakeholder community.

The Corpus Christi MPO staff reports the specific criteria and analysis procedures that compare portfolios and scenarios comprised of distinct projects and policies for progress toward achieving the regional, state, and national performance goals.

### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Updated the Financial Plan of the 2020-2045 MTP to serve as the starting point for the 2050 MTP Financial Plan. New fiscal forecasts from the TxDOT UTP process in 2022 was the initial update to the previous 2020 UTP funding estimates.
- Corpus Christi MPO staff reviewed the current status of the regional ITS efforts and discussed the feasibility of integrating ITS resources into the incident management strategies.
- Corpus Christi MPO staff discussed the possible opportunities to partner or leverage public resources into operations and maintenance projects in the region.
- Corpus Christi MPO identified possible locally relevant performance measures amidst state and federal performance measures as they became available to be integrated into the project selection process for the 2050 MTP and FY 2021-2024 TIP updates and amendments. The state performance measures were adopted by the Corpus Christi MPO for these purposes.

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### **SUBTASK 4.3 – IDENTIFY NEEDS AND DEFINICENCY LOCATIONS**

Used the performance goals and measured conditions to identify specific corridors, roads and areas which are deficient in one or more ways. This dataset is the basis for problems and opportunities that can be addressed by “projects or policies”. Using the adopted goals, metrics and baseline conditions; the Corpus Christi MPO TPC established a list of needs for at least: pavement condition, bridge condition, crashes, and congestion.

Corpus Christi MPO staff began the process to identify the location of transportation deficiencies where both the current and future system experience safety issues, unacceptable roadway condition, operational problems, lack of interconnectivity, congestion, or other issues.

#### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- Maintained an up-to-date fiscally constrained 10-Year Plan for the periods of FY 2021-2030 and FY 2022-2031.
- Identified opportunities to partner and leverage public resources for projects.
- Participated in Extreme Weather and Climate Change Adaptation presentation
- Viewed NCHRP Resiliency for Real Forum
- Viewed webinar The Texas Triangle: An Emerging Power in the Global Economy

### **SUBTASK 4.4 – DEVELOP A FINANCIAL PLAN OF REASONABLE AVAILABLE FUNDING**

Transportation systems are challenged to accommodate many competing needs, and fiscal constraint is vital to prioritizing resources to address those needs. Fiscal constraint also helps clarify what is possible with existing funding sources and can inform debate about a need for new funding. Providing realistic funding and revenue forecasts from the outset supports decision-maker, stakeholder, and public trust by providing understanding of the limits of funding to support implementation of strategies.

The Corpus Christi MPO staff, in cooperation with CCRTA, local municipalities and counties, and TxDOT, developed this financial plan. This effort required forecasting reasonably foreseeable revenue resources using realistic and collaboratively developed assumptions about existing funding sources, potential funding sources, alternative financing strategies, and inflation rate. It provides forecasts in both future year and current year dollar values.

The financial plan compared the estimated revenue from existing and proposed funding sources that can reasonably be expected to be available for transportation uses, and the estimated costs of constructing, maintaining and operating the total (existing plus planned) transportation system over the period of the plan. The estimated revenue by existing revenue source (local, State, and Federal and private) available for transportation projects was determined and shortfalls identified. Proposed new revenues and/or revenue sources to cover shortfalls were investigated, including strategies for ensuring their availability for proposed investments. Existing and proposed revenues cover all forecasted capital, operating, and maintenance costs. All cost and revenue projections were based on the data reflecting the existing situation and historical trends.

The effort included a methodology for identifying costs of individual capital projects and on-going maintenance and operations programs, along with acknowledging restrictions and requirements associated with each funding source. Revenue forecasts, life-cycle costs, and inflationary assumptions for projects and programs are developed for immediate (existing + committed), short-term (next 2023-2026 TIP) midterm (UTP years 2035) and long-term (2050) investments. Financial information and estimates of risk of shortfalls are compared against the lifecycle expenses of the transportation system are available in one-year increments through year 2035 and five-year increments through year 2050.

Corpus Christi MPO staff created an easily understood document that summarizes available revenues and likely costs of construction, operations, and maintenance of projects and programs, taking into account inflation and year of expenditure. This task established the revenue basis for fiscal constraint of both the MTP as well as the funding sources for the TIP. Using the same revenue projections for the long-range plan and the TIP ensures financial consistency between the plan and program.

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### **SUBTASK 4.5 – DEVELOP, ANALYZE, AND REFINE SCENARIOS FOR ANALYSIS AND INVESTMENT**

Scenario planning helps decision-makers prepare for an unknowable future by providing a framework for comparing and contrasting various forces. The FHWA Scenario Planning Guidebook provides assistance on using scenario planning. As part of scenario planning, stakeholders shape alternative descriptions or scenarios of what the future could look like. These alternative scenarios are then assessed using transportation models, sketch-planning tools, or other quantitative methods to estimate the differences between the alternative visions of the future on performance measures or indicators of desired outcomes. The Corpus Christi MPO staff worked with regional leaders and local economic groups to adopt unified data and methodologies for existing and future population for households and employment by type.

#### Work Performed and Status

The development of these implementation scenarios was not ready for development for the 2050 MTP in FY 2021 UPWP time period. Portions of the subtask were deferred and rolled over into the FY 2022 UPWP.

Corpus Christi MPO staff performed and completed the following:

- The Corpus Christi MPO staff discussed the general approach to developing scenarios from our existing 2045 MTP as a practice for the future application in the 2050 MTP process.
- As projects are submitted and performance measures applied for the TIP and UTP processes, the Corpus Christi MPO staff will revisit this scenario planning activity to work through the details of its implementation. Using 2045 MTP updates as well as TIP and UTP revised development processes is a way to practice the updating procedures and will continue through those processes and allow staff to understand the details of the effort leading toward implementation as part of the development of the 2050 MTP.

### **SUBTASK 4.6 – DOCUMENT PLAN AND PROCESSES**

Transparency promotes accountability by providing the public with information about what the Corpus Christi MPO is doing. Corpus Christi MPO inventoried information currently available for download and foster the public's use of this information to increase public knowledge and promote public scrutiny of processes. The Corpus Christi MPO increased agency accountability and responsiveness; improved public knowledge of the agency and its operations and responded to needs and demands as identified through public consultation.

#### Work Performed and Status

This is an on-going subtask that is developed as processes and updates occur to the 2045 MTP, TIP documents and the TxDOT UTP updates. As we developed our internal processes and meet with technical and citizen groups on these processes, we continued to document the activities and development of the portions of the documents to be used on the 2050 MTP and companion documents.

### **SUBTASK 4.7 – EVALUATE IMPACTS AND DEVELOP MITIGATION**

Transportation planning requires examining the complex interactions among social, economic, environmental, and political factors and identifying tradeoffs, especially when different stakeholder groups have conflicting interests. The Corpus Christi MPO MTP is required to be consistent with local land-use development, historic preservation, and environmental protection plans in the region. The Corpus Christi MPO uses an 8-step collaborative mitigation planning. A consistent desire of the Corpus Christi MPO is to add value to other agencies' planning and mitigation efforts and reinforce their individual effectiveness. One crucial example is the Texas Parks and Wildlife Department's (TPWD) Texas Conservation Action Plan (TCAP) Gulf Coast Prairies and Marshes Ecoregion Handbook. This document includes a list of concerns and potential actions that could yield mutual benefit.

The Corpus Christi MPO staff supports regional planning to address mitigation of environmental, historic preservation, stormwater and air quality impacts of transportation in alignment of environmentally related performance measures.

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### Work Performed and Status

This activity is on-going. The Corpus Christi MPO staff reviewed documents that were being developed by the partner agencies and participated in webinars and on-line public meetings of those groups. We saved updates to the plans in our draft 2050 MTP document library for future updates to our MTP and their documents over the next few years.

Corpus Christi MPO staff performed and completed the following:

- Participated in the Coastal Bend Air Quality Partnership activities.
- Coordinated with the Pollution Prevention Partnership on federal reporting and regional outreach.
- Developed a narrative and data contributions to annual Ozone Advance Report and other regional reporting documents as part of our MPO documents, specifically the DRAFT 2050 MTP sections and the FY 2021-2024 TIP Amendments and FY 2022 proposed Amendment and organization of the future FY 2023-FY 2024 UPWP

### **SUBTASK 4.8 – PLANNING AND PROGRAMMING PROCESS EVALUATION AND DEBRIEF**

This effort provided analysis for lessons learned, best practices and recommendations for future planning, training, and process development. As improvement actions are identified and addressed, it is important that any relevant plans, policies, and procedures are updated accordingly.

### Work Performed and Status

Corpus Christi MPO staff developed an After-Action Report to identify strengths of planning and programming processes that should be maintained and built upon, as well as identifying potential areas of improvement. For each step in the MTP and TIP processes the following questions are answered by stakeholders and documented by MPO staff:

- What did we want to accomplish?
- How did this change as you progressed?
- What did we accomplish?
- Why was there a difference between what we wanted and what we did?
- What went well and why?
- What could have gone better?
- What advice would you give yourself if you were to go back to where you were at the start of the project?
- What should we have learned from this project a year from now?
- How do we adapt our processes for a better outcome OR how do we repeat our successes?

The Corpus Christi MPO staff created and distributed the After-Action Report and documented the answers to the questions above in public meetings of the TAC and TPC.

### **SUBTASK 4.9 – PROCESS DOCUMENTATION AND ENHANCEMENT**

Corpus Christi MPO staff reviewed efforts in support of regional transportation planning to address mitigation of storm water impacts and air quality impacts of transportation in alignment of environmentally related performance measures.

### Work Performed and Status

Corpus Christi MPO staff performed and completed the following:

- We participated in the various meetings of the Coastal Bend Air Quality Partnership (CBAQP) for air quality issues and reporting
- We reviewed local government agendas for transportation projects that had storm water aspects of the projects and compared these to projects in our TIP and MTP that may be related or in proximity to those projects.

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**TASK 4 - FUNDING SUMMARY** (Through September 2021 – latest available from MPO’s Fiscal Agent)

<b>Funding Source</b>	<b>Amount Budgeted</b>	<b>Amount Expended</b>	<b>Balance</b>	<b>% Expended</b>
<b>Transportation Planning Funds (PL 112 &amp; FTA 5303)</b>	<b>\$235,000</b>	<b>\$163,933.28</b>	<b>\$71,066.72</b>	<b>69.76%</b>
<b>Local Planning Funds</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0</b>
<b>FTA (Sec. 5309)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0</b>
<b>CMAQ</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0</b>
<b>STP MM</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0</b>
<b>TOTAL</b>	<b>\$235,000</b>	<b>\$163,933.28</b>	<b>\$71,066.72</b>	<b>69.76%</b>

The Corpus Christi MPO staffing levels were 5 of 6 FTEs from in FY 2021.

## TASK 5 - SPECIAL STUDIES

Task 5 included an overall description of the Corpus Christi MPO's special studies activities. These included all subtasks listed in the UPWP with a description of each subtask product received or work accomplished and agency responsible. If work under a subtask was completed by a consultant/subcontractor, this is indicated. If an "amount expended" has exceeded or is below the "amount budgeted" by 25% or more, this must be noted in the task funding table and an explanation must be provided for the variance. For FY 2021 all tasks were completed within the budgetary limitations with no variance. Additional funds were rolled over to the FY 2022 UPWP tasks.

### TASK 5 – OVERALL DESCRIPTION

Task 5.0 encompasses the special projects to be undertaken by the Corpus Christi MPO.

#### SUBTASK 5.1 – REGIONAL SAFETY PLANNING

**OBJECTIVE** – A significant part of the Corpus Christi MPO responsibility is working with our State and local government partners to convert data into information that is useful for decision making. From these efforts the Corpus Christi MPO identifies opportunity areas as they relate to collaborating with our State and local government partners. This subtask builds upon and enhance current transportation planning efforts, especially safety planning efforts, related to data, analysis, and project selection, with a focus on:

- Data visualization: Make data analysis and insights accessible to policy-makers and project implementers through clear, compelling data visualizations.
- Data integration: Integrate existing databases and new data sources to answer safety questions.
- Predictive insights: Use advanced analytic techniques to identify risk patterns and develop insights that anticipate and mitigate safety risk to reduce injuries and fatalities.

#### Work Performed and Status

Corpus Christi MPO staff cancelled this project previously and carried over the funds for the FY 2021- FY 2022 UPWP. For FY 2021, the MPO reviewed and worked with partners to acquire the TxDOT-purchased INRIX data for Texas MPOs' to use. Aspects of this proposed effort were combined into the Corpus Christi MPO's efforts with the updates to the 2045 MTP and the CMP.

#### SUBTASK 5.2 – RESILIENCE AND DURABILITY TO EXTREME WEATHER PILOT PROJECT

The separate FHWA grant funds continued to support design work by a consultant for a nature-based solution to enhance the resiliency to extreme weather of Laguna Shores Road along the western shore of the Laguna Madre.

#### Work Performed and Status

- In FY 2021, the Corpus Christi MPO's resiliency consultant team (HDR) and the engineering firm (LJA) of the City of Corpus Christi Laguna Shores Road project team finalized details of the project that was bid and awarded by the City of Corpus Christi. The shoreline protection component of the roadway reconstruction project was included in the base bid for construction. Construction is still underway and expected to be completed in Calendar Year 2022.
- In future years, the Corpus Christi MPO team with assistance of the TAMU-CC staff and students will conduct future monitoring process for the project to determine the effectiveness in terms of habitat development and shoreline condition and to evaluate the utility of the pilot technique(s) to enhance the durability of other segments of Laguna Shores Road and other, similarly vulnerable transportation infrastructure.

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**TASK 5.0 – FUNDING SUMMARY**

Funding Source	Amount Budgeted	Amount Expended	Balance	% Expended
Transportation Planning Funds (PL 112 & FTA 5303)	\$25,000	\$8,894.21	\$16,105.79	35.58%
FHWA Resiliency Pilot Grant*	\$15,000	\$10,091.37	\$4,908.63	67.28%
Local Planning Funds	\$0	\$0	\$0	0
FTA (Sec. 5309)	\$0	\$0	\$0	0
CMAQ	\$0	\$0	\$0	0
STP MM	\$0	\$0	\$0	0
<b>TOTAL</b>	<b>\$40,000</b>	<b>\$18,985.58</b>	<b>\$21,014.42</b>	<b>47.46%</b>

\*FHWA Resiliency Pilot Grant is not PL Funds and not included in the PL funding totals. Only Corpus Christi MPO staff time (\$15,000) is included in the FY 2021 UPWP and shown in this table. The total grant was \$110,770.

<b>BUDGET SUMMARY</b>
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The following table shows a recap of the FY 2021 funding amounts budgeted, expended, the remaining balance and the total percent (%) expended. A “budget summary” table is provided for each funding source identified in the UPWP and repeated in the APER.

**TOTAL TRANSPORTATION PLANNING FUNDS (TPF) BUDGETED AND EXPENDED FOR FY 2021**

UPWP Task	Amount Budgeted	Amount Expended	Balance	% Expended
1.0	\$709,000	\$248,991.31	\$460,008.69	35.12%
2.0	\$172,000	\$115,778.23	\$56,221.77	67.31%
3.0	\$181,000	\$136,721.43	\$44,278.57	75.54%
4.0	\$235,000	\$163,933.28	\$71,066.72	69.76%
5.0 (*)	\$40,000	\$18,985.58	\$21,014.42	47.46%
<b>TOTAL</b>	<b>\$1,337,000</b>	<b>\$684,409.83</b>	<b>\$652,590.17</b>	<b>51.19%</b>

\*Note: The funds for Task 5.0 are a separate FHWA Resiliency Grant. Only Corpus Christi MPO staff time (\$15,000) is included in the FY 2021 UPWP and shown in this table. The total grant was \$110,770.

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**FHWA Resiliency Pilot Project  
Budgeted and Expended for FY 2021**

UPWP Task	Amount Budgeted	Amount Expended	Balance	% Expended
1.0	0	0	0	0
2.0	0	0	0	0
3.0	0	0	0	0
4.0	0	0	0	0
5.0	\$110,770	\$109,334.91	\$1,435.09	98.7%
<b>TOTAL</b>	<b>\$110,770</b>	<b>\$109,334.91</b>	<b>\$1,435.09</b>	<b>98.7%</b>

**FTA (Sec. 5307) Funds  
Budgeted and Expended for FY 2021**

UPWP Task	Amount Budgeted	Amount Expended	Balance	% Expended
1.0	0	0	0	0
2.0	0	0	0	0
3.0	0	0	0	0
4.0	0	0	0	0
5.0	0	0	0	0
<b>TOTAL</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>0 %</b>

**CMAQ Funds  
Budgeted and Expended for FY 2021**

UPWP Task	Amount Budgeted	Amount Expended	Balance	% Expended
1.0	0	0	0	0
2.0	0	0	0	0
3.0	0	0	0	0
4.0	0	0	0	0
5.0	0	0	0	0
<b>TOTAL</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>0 %</b>

**STP – MM Funds  
Budgeted and Expended for FY 2021**

UPWP Task	Amount Budgeted	Amount Expended	Balance	% Expended
1.0	0	0	0	0
2.0	0	0	0	0
3.0	0	0	0	0
4.0	0	0	0	0
5.0	\$ 0	\$ 0	\$ 0	0 %